

Slim Redundant Power Supply

Many data servers and high end network equipment require complex and robust power distribution system. To maximize the performance of these system under various operating conditions and reduce the overall power consumption, varying the voltages and controlling the operation mode of power converters becomes essential for any high performance system. EnGenius develops generic, modularized hot swappable power supplies from 300W to 500W protect your valuable equipment from power circuit and power component failures. We offer design service to satisfy your commercial, industrial and no down time power system requirements.

Features

- PMBus™ Communication
- ERA30: 80 PLUS Gold Efficiency
- ERA30: -10~60°C Working Temperature
- ERA50: 0~50°C Working Temperature
- ERA30-SGD-BF: 1U Redundant Design
- ERA30-SGD2H-BF: 1U 1+1 Redundant Design
- ERA50-SPD2H-BF: 1U 1+1 Redundant Design
- ERA30: MTBF >250,000 hours at 25°C typical load
- ERA50: MTBF > 100,000 hours at 25°C typical load
- ERA30 Surge: 2KV (L/N-PE) & 1KV (L-N)
- ERA50 Surge: 2KV (L/N-PE) & 1KV (L-N)
- Active Power Factor PF ≥ 0.95



Technical Specifications

Output

	ERA30-SGD-BF		ERA30-SGD2H-BF		ERA50-SPD2H-BF				
DC Voltage	+12V	+5VSB	+12V	+5V	+12V	+5V	+3.3V	-12V	+5VSB
Maximum Load	25A	2A	25A	20A	42A	20A	20A	0.5A	3A
Minimum Load	1A	0.1A	1A	0A	1A	0A	0A	0A	0.1A
Power Output	300W		300W		500W				
Ripple & Noise	120mV	50mV	120mV	50mV	120mV	50mV	50mV	120mV	50mV
Output Voltage Tolerance	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%	±5%
Line Regulation	±1%		±1%		±1%				
Load Regulation	±5%		±5%		±5%				
Turn On Time And Rise Time	<3s,20ms@115Vac / 230Vac at full load		<3s,20ms@115Vac / 230Vac at full load		<3s,20ms@115Vac / 230Vac at full load				
Hold Up Time	≥12ms@115Vac at 70% load		≥12ms@115Vac at 70% load		≥12ms@115Vac at 70% load				

Technical Specifications

Input

	ERA30-SGD-BF	ERA30-SGD2H-BF	ERA50-SPD2H-BF
Voltage Range	90~264Vac	90~264Vac	90~264Vac
Operation Voltage	100~240Vac full range, with $\pm 10\%$ tolerance	100~240Vac full range, with $\pm 10\%$ tolerance	100~240Vac full range, with $\pm 10\%$ tolerance
Frequency Range	47~63Hz	47~63Hz	47~63Hz
AC Current (Full Load)	3.5A / 115Vac, 1.6A / 230Vac	3.5A / 115Vac, 1.6A / 230Vac	5.3 A / 115Vac, 2.6A / 230Vac
Inrush Current	30A peak@115Vac, 50A peak@230Vac	30A peak@115Vac, 50A peak@230Vac	30A peak@115Vac 50A peak@230Vac
	Cold start at full load	Cold start at full load	Cold start at full load
Power Factor (Typ.)	≥ 0.95 @115Vac / 230Vac and full load	≥ 0.95 @115Vac / 230Vac and full load	≥ 0.95
Leakage Current	<3.5mA / 240Vac	<3.5mA / 240Vac	<3.5mA / 240Vac

Specifications

AC Input Current and Inrush Current

Rated Output Power for Each Input Voltage Range

Parameter	Min. Input	Input Voltage	Max. Input	Brown In	Brown Out
115Vac	90Vac	ERA30-SGD-BF: 100~ 120Vac	132Vac	80Vac \pm 5Vac	80Vac \pm 5Vac
		ERA30-SGD2H-BF: 100~ 120Vac			
		ERA50-SPD2H-BF: 100 ~127Vac			
230Vac	180Vac	200~ 240Vac	264Vac	-	-
Frequency	47Hz	50 / 60Hz	63Hz	-	-

Maximum Input Current

	ERA30-SGD-BF		ERA30-SGD2H-BF		ERA50-SPD2H-BF	
Input Voltage	90~132Vac	180~264Vac	90~132Vac	180~264Vac	90~132 Vac	180~264 Vac
Input Current	3.5A@115Vac	1.6A@230Vac	3.5A@115Vac	1.6A@230Vac	5.3A@115Vac	2.6A@230Vac
Maximum Inrush Current	30A*peak@115Vac	50A*peak@230Vac	30A*peak@115Vac	50A*peak@230Vac	30A*peak@115Vac	50A*peak@230Vac
Max Power	300W	300W	300W	300W	500W	500W
Peak Power	330W, ≤ 12 ms	330W, ≤ 12 ms	330W, ≤ 12 ms	330W, ≤ 12 ms	550W, ≤ 12 ms	550W, ≤ 12 ms

Voltage Regulation, Ripple and Noise

	ERA30-SGD-BF Load Range		ERA30-SGD2H-BF / ERA50-SPD2H-BF				
Output Voltage	+12V	+5VSB	+12V	+5V	+3.3V	+5VSB	-12V
Load Reg.	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$
Line Reg.	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
Ripple & Noise	120mV	50mV	120mV	50mV	50mV	50mV	120mV

Specifications

LED Indicators

Power Supply Status	Color
Power Switch On	Blinking Green → Green
Normal State	Green
Power Switch Off	Green → Blinking Green
Standby (AC In, Only +5VSB output)	Blinking Green
Power Fail	Red

Note: Power will send a gentle alarm to indicate its readiness when switched on.

Buzzer Indicators

Only for ERA30-SGD2H-BF / ERA50-SPD2H-BF

Power system condition	Backplane Buzzer Status
No AC input power to one power module only after PS ON	Buzzing
One power module not inserted or pulled out	Buzzing
AC Input present/only standby mode	Off
Power module PS ON and output normal	Off
Any power module failure after PS ON	Buzzing

AIRFLOW

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

Back to front

Environment

Operating Ambient, normal mode (inlet air)

ERA30-SGD-BF/ERA30-SGD2H-BF

-10~60°C (14~140°F)

ERA50-SPD2H-BF

0~50°C (32~131°F)

Non-operating Ambient

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

-40~80°C (-40~176°F)

Storage Temperature

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

-40~80°C (-40~176°F)

Operating Humidity

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

20% ~ 90% RH non-condensing

Non-Operating Humidity

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

5% ~ 95% RH non-condensing

Temp. Coefficient

ERA30-SGD-BF/ERA30-SGD2H-BF

±0.03%/°C (0~60°C)

ERA50-SPD2H-BF

±0.03%/°C (0~50°C)

Operating Altitude

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

16,404 ft (5000M)

Hi-Pot

Dielectric Withstand Voltage

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

3sec / 1.5KVac or 2545Vdc with a trigger limit of 10mA.

Surge Voltage

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

Line to Line: 1KV

Line-to-Ground: 2KV

Others

MTBF

ERA30-SGD-BF/ERA30-SGD2H-BF

250Khrs min SR332 (25°C)

ERA50-SPD2H-BF

100Khrs min SR332 (25°C)

Dimensions

ERA30-SGD-BF

220mm x 50.5mm x 40mm (Lx Wx H)

ERA30-SGD2H-BF/ERA50-SPD2H-BF

260mm x 106mm x 41.5mm (Lx Wx H)

Weight

ERA30-SGD-BF

1000g

ERA30-SGD2H-BF

2350g

ERA50-SPD2H-BF

2200g

AC Connector

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

IEC320 C14 type 3 pin connector

DC Output Connector

ERA30-SGD-BF

Oupiiin 9392-4S24P04N12CB30DA

ERA30-SGD2H-BF/ERA50-SPD2H-BF

ATX

Safety

ERA30-SGD-BF/ERA30-SGD2H-BF/ERA50-SPD2H-BF

UL, CB, FCC, CE